KC FARM SCHOOL AT GIBBS ROAD LESSONS TO GO

FARM TO MARKET

Educator Lesson Plan

BACKGROUND

Goal: To increase knowledge and awareness of where our food is grown and how it gets to the farmers market.

The term “food system” refers to the processes that connect the spectrum of food production to food processing, consumption, and ultimately disposal. It is sometimes described as including all processes involved in keeping us fed: **growing, harvesting, processing (or transforming or changing), packaging, transporting, marketing, consuming, and disposing of food and food packages.**

In the United States, most supermarket food is sourced regionally, nationally or internationally but if you visit a farmers market, you are joining the local food system.

Generally speaking, local food is food that travels the entire supply chain (from production to consumption) in the same geographic area. Because there is no federally-established definition of what ‘local food’ means, it can vary substantially between state and local governments, nonprofit organizations, and the private sector. At KC Farm School at Gibbs Road’s farmers market, local food means food that was grown on the farm that the farmers market is at. We like to call it ‘hyper-local’ food as a guest to the farm can literally walk the field and harvest their own produce for consumption the same day.

Although there is a recent growth trend in local foods, many of the farming techniques used by local farms, such as regenerative agriculture, and direct to consumer market models, such as community-supported agriculture (CSA), are not new. Many hallmarks of the local food system have ties to historic Black, Indigenous, People of Color (BIPOC) communities. There are many BIPOC individuals who helped build the foundation of the local food system we see today. One notable figure is Professor Booker T. Whately who studied and wrote many articles on regenerative agriculture and created an early form of CSA.

KC Farm School at Gibbs Road distributes its food through **direct sales to the consumer at the weekly on-farm farmers market**, through a **Community Supported Agriculture program** in which members sign up each year to receive a weekly box of the best harvested vegetables, through partnership with **gleaning** organizations who harvest produce in the fields that is extra or which was intentionally planted for donation to those in need and through **barter** (trade) for services and skills individuals have.

The image below shows the elements of the most commonly used food systems as well as the costs and benefits associated with food systems. Farmers markets skip all of the in-between steps and move food directly from production to consumer!

Image from '[Food Systems Thinking]'

Sustainable Local Food Systems

Image from Boston Organics.

Resource: Food System Primer

Standards Addressed:

- Kansas Health Education Standards Content Standards for Community Health: Standard #7: Students will demonstrate the ability to practice health-enhancing behaviors to enhance health or reduce health risks.
- English Language Arts Foundational Practices: 1. Write, speak, read, and listen appropriately in all disciplines. 2. Seek out and work to understand diverse perspectives
- Science & Engineering Practice: A practice of both science and engineering is to use and construct models as helpful tools for representing ideas and explanations. These tools include diagrams, drawings, physical replicas, mathematical representations, analogies, and computer simulations.

ENGAGE

- Distribute scratch paper, whiteboards or post-it notes to students
- ASK students to write down either their favorite meal or the last meal they ate.
- DIRECT students to break that meal down into 5 of the ingredients it contains and write down the ingredients.
    - For example a hamburger could be broken down into 1)Meat 2)Cheese 3)Bun 4)Lettuce 5)Pickle
- PARTNER the students and ask them to compare their ingredients list and identify where at least 3 of their cumulative items came from. Have them

discuss for 3-5 minutes.

- WHOLE GROUP discussion- Have each partner duo share at least one of their ingredients and where it likely came from. Redirect and correct as needed.
    - For example, if a group says 'cheese comes from a cow', ask them where the cow likely lives. Make it engaging as appropriate with questions like: Is the cow in your backyard?
    - As partners share, begin to integrate key vocabulary terms about food systems including:
        - Production; Distribution; Transportation; Consumption; National, Regional and Local Food Systems
- WRAP-UP- Lead students through a discussion about how local food systems improve **sustainability** in a region:
    - **Environment:** Local food decreases greenhouse gas (GHG) emissions due to less transportation needs and improves air and water quality if farmers are using regenerative ag techniques
    - **Society:** Human health improves by consuming locally sourced, seasonal, nutrient dense food. Human connection increases when individuals engage in their communities.
    - **Economy:** Food money stays local which improves the economic outlook for farmers, food processors and communities at large. Employment on small farms also increases economic opportunity.

EXPLORE	
CLASSROOM ACTIVITIES	ON-FARM ACTIVITIES
Option: Hungry Planet Photo Gallery Tell students that the photos in the link above show a week's worth of food for families around the globe. Show the gallery and pause for a moment on each family. Direct students to jot down what they notice and wonder about: • The quantity of food • The packaging • The variety • The type of food • Where the food might have come from Once complete, lead a whole group discussion about how global families weekly food compares to US food	**Option: Local Food Chef Challenge** Goal: Create a group meal using only food found on the farm in under 40 minutes! Prior to activity: • Review food safety handling rules with students • Review tool usage and harvesting techniques with students Activity: 1. Tell students which items are available for harvest today; which staple items are available (ie: spices, oil, condiments) and what kitchen tools are available (ie: blender, microwave, stove, oven) 2. Put students into groups of 4 and

consumption. Point out key concepts including access, waste, consumption, transportation.

Option: Food System Chain
Divide the class into groups of five. Give each group a copy (on different colors of paper) of the Food System Chain activity sheet. Give one link to each group member.
Ask them to think about the food production steps and possible weaknesses that could occur in the system.
Allow five minutes for students to answer the "what if" question listed on their "link."
Once everyone is finished, have all the students with the same question get into a group together and discuss their responses.
Each group should now write one paragraph incorporating everyone's ideas and any new ones sparked by the discussion.
Each group should present their final paragraph to the class.
Ask students to regroup with the four other students who have "links" of the same color. Now regrouped, students should use a stapler to connect the links of their chain in the correct order.
Display chains and final paragraphs on a bulletin board titled "The Food System Chain is Only as Strong as its Weakest Link." (Adapted from Ag Classroom Matrix)

have them brainstorm for 7-10 minutes about what dish they would like to prepare using the guidelines above.
3. Lead students to the harvest areas. Review and model food safety and harvest techniques again.
4. Once students have harvested their crops, return to the kitchen and give groups 20 minutes to prepare their food.
5. Enjoy a local meal together and discuss the nutritional impact, environmental impact and economic impact of eating local.

Option: Map the farm food system
1. Review the steps of the food system found on the farm
    a. Production
    b. Processing
    c. Distribution
    d. Consumption
    e. Waste Recovery
2. Group students into 5 groups and assign each group a step in the local food system. As a group, they will:
    a. Interview farm staff about that step
    b. Compile the information onto a visual display (signage)
    c. Place the sign on the farm in a spot where that step happens the most

(Give 30-45 minutes for this activity)
3. Whole group tour beginning at Production. Each group presents what they learned to the group.

EXPLAIN

Share the food production steps below , and discuss what needs to happen at each step. Some prompting questions and possible answers may include:

Preparation (getting ready to grow food):
What does the farmer need to begin growing a crop? (seeds, fertilizer, equipment, land)

Growing the food:
What does the farmer need for the crop to grow? (sunshine; rain; labor or hands to work, weed, and care for the crop; understanding of growing food; knowledge about land and agriculture)

Harvesting and transportation (moving food from the field):
What is needed to harvest and transport the crop from the field? (hands or laborers; mechanical harvesters; trucks, trains, ships, or airplanes; fuel; satisfactory/safe roads)

Where is the crop moved after it is harvested from the field? (some may be kept for personal use by the family, taken to local markets to be sold, or taken to a farmers' co-op, and some may be taken to processing factories or be held in a storage facility) How far does the crop have to travel in each of these situations?

Storing the food:
How might the food be stored? (by canning, freezing, drying, salting, or storing in a cellar or in a storage facility with controlled temperature)

Where might the food be stored? (grain elevators, refrigerators, large freezers, or other controlled environments)

Is this the only step in which the food may be stored? (no, food may also be stored after processing before it is distributed for purchase)

Processing the food:
What might happen to a tomato crop at a food processing factory? (if destined for ketchup, the tomatoes would be washed, heated, skinned, and smashed; the tomato smash would be mixed with salt and other spices to make ketchup; the ketchup would be bottled and labeled for distribution to a market) What else could happen to a tomato crop? What about other crops?

Distribution:
How does a farmer sell a product? (at a local farmer's market; directly to a local supermarket where individual negotiations are made; to a farmers' co-op where many farmers bring their products together to sell to a larger buyer)

How is the crop resold to larger national or international markets? (it could be sold through a large corporation or purchased by the government; it could be sold over the internet to an international buyer like a supermarket or processing plant)

Preparing and consuming the food (at home or in a restaurant):
Discuss how people need money to buy food unless they grow their own.
Discuss how people must understand how to use the food safely and choose foods that keep them healthy.
Show the following video about Angelica's journey as a food processor and how she distributes her homemade salsa (Spicy Mama's Salsa):
https://youtu.be/-_VG-raX9ro

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ELABORATE	
CLASSROOM ACTIVITIES	ON-FARM ACTIVITIES
Conduct an Interview Arrange a Zoom meeting or in-person engagement with a local food system player (farmer, small food business owner, food processor, compost company employee, etc.) and have students draft a list of questions to ask the guest. Reach out to KC Farm School to arrange a meeting with our staff. After the meeting, they can compile their questions and answers into a product of choice to educate the public. Product choices could include a booklet, video, Powerpoint, speech, art or graphic short story. To be authentic, student products should be displayed publicly or shared digitally with a wider audience.	**Work at the Farmers Market!** Get on-farm, hands-on in all aspects of taking food from the field to the consumer. 1. Harvest a crop 2. Clean, sort, bundle and store the crop until market 3. Determine a suggested price for the crop 4. Set up the market display 5. Assist in promoting the market 6. Welcome and engage market guests to sell your crop 7. Clean up market and determine how to distribute unsold goods 8. Analyze market data and determine profit margins 9. Plan improvements for the next market based on feedback

EVALUATE

Have students complete the Education Survey found here or via QR code

Optional Evaluative Activities:

1. Generate a quiz for students using the key vocabulary and content found in this lesson.
2. If a schoolyard garden is available, have students grow a crop, create a value-added item from the crop, market and sell the crop. If no garden is available, coordinate with your local farm to procure bulk produce.

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